

Listing of the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (previously presented) A system for generating forward error correction (FEC) packets in a time division multiple access (TDMA) system, comprising:
 - a first FEC encoder that receives data and encodes first FEC data with the data to form FEC encoded data;
 - a payload packet formatter that formats the FEC encoded data into a data packet and delivers the data packet to a TDMA time slot;
 - a second FEC encoder, in parallel with the payload packet formatter, that encodes the FEC encoded data to produce second FEC data; and
 - an FEC packet formatter, in parallel with the payload packet formatter, that formats the second FEC data into an FEC packet;wherein the second FEC encoder and the FEC packet formatter are only utilized when an additional TDMA time slot is available for the FEC packet.
2. (previously presented) The system for generating FEC packets set forth in claim 1, wherein the additional TDMA time slot is an otherwise empty TDMA time slot.
3. (previously presented) The system for generating FEC packets set forth in claim 2, wherein a header associated with the data packet contains information associating the data packet with the FEC packet contained in the otherwise empty TDMA time slot.
4. (original) The system for generating FEC packets set forth in claim 2, wherein a location corresponding to the otherwise empty TDMA time slot is predetermined by a TDMA master.
5. (previously canceled)

6. (original) The system for generating FEC packets set forth in claim 1, wherein the second FEC encoder employs a systematic block code to produce the second FEC data.
7. (original) The system for generating FEC packets set forth in claim 1, wherein the FEC packet is ignored by a receiver to conserve power.
8. (previously presented) A system for decoding a forward error correction (FEC) packet, comprising:
 - a first FEC decoder that receives an FEC packet containing first FEC data and a data packet containing a data payload and second FEC data, the first FEC decoder partially decoding the data payload and second FEC data contained in the data packet using the first FEC data contained in the FEC packet; and
 - a second FEC decoder that receives the partially decoded data payload and second FEC data and further decodes the data payload based on the second FEC data.
9. (original) The system for decoding the FEC packet set forth in claim 8, further comprising:
 - a header decoder to decode a header associated with the data packet and identify the FEC packet.
10. (original) The system for decoding the FEC packet set forth in claim 8, wherein the FEC packet is received from a predetermined time division multiple access (TDMA) time slot.
11. (original) The system for decoding the FEC packet set forth in claim 10, wherein a location corresponding to the TDMA time slot is predetermined by a transmitter.
12. (original) The system for decoding the FEC packet set forth in claim 8, wherein the FEC packet is ignored by a receiver to conserve power.

13. (currently amended) A method of processing forward error correction (FEC) packets, the method comprising the steps of:

receiving a data packet that contains data and first FEC data;
receiving an FEC packet that contains second FEC data; ~~and~~
deciding whether to use the second FEC data to process the data- packet;
processing the data packet using the second FEC data to produce partially decoded data
if use of the second FEC data is decided; and
processing the partially decoded data using the first FEC data.

14. (canceled)

15. (canceled)

16. (canceled)

17. (currently amended) The method set forth in claim 13, further comprising the step of:
processing the data using only the first FEC data if it is decided not to use the second
FEC data.

18. (previously presented) The method set forth in claim 17, wherein the recited steps are performed in the recited order.

19. (previously presented) The method set forth in claim 13, further comprising the step of:
ignoring the second FEC data to conserve power.

20. (previously presented) The method set forth in claim 13, wherein the recited steps are performed in the recited order.

21. (new) A method for generating forward error correction (FEC) packets in a time division multiple access (TDMA) system, the method comprising the steps of:

receiving data;

encoding the received data with first FEC data to form FEC encoded data;

formatting the FEC encoded data into a data packet;

delivering the data packet to a TDMA time slot;

determining if an additional TDMA time slot is available for an FEC packet;

encoding the FEC encoded data to produce second FEC data only if the additional TDMA time slot is available, the step of encoding the FEC encoded data being done in parallel with the step of formatting the FEC encoded packet into a data packet; and

formatting the second FEC data into an FEC packet only if the additional TDMA time slot is available, the step of formatting the second FEC data being done in parallel with the step of formatting the FEC encoded packet into a data packet.

22. (new) A method for decoding a forward error correction (FEC) packet, the method comprising the steps of:

receiving an FEC packet containing first FEC data and a data packet containing a data payload and second FEC data;

partially decoding the data payload and second FEC data contained in the data packet using the first FEC data contained in the FEC packet; and

further decoding the partially decoded data payload using the second FEC data.